

Glossary

Darrell Zastrow



abiotic: refers to non-living objects, structures, and processes.

age class: describes the age of a stand of trees, usually broken down into 20 year classes, i.e. 0–20 years, 21–40 years, etc.

artificial regeneration: the process of renewing the forest through sowing of seed, planting of seedlings or other human means.

associate: in an ecological context, associates are those organisms that characteristically share habitats and are often found near one another.

average annual temperature: the average temperature of each day, averaged by year, for the last 30 years.

barrens: an ecosystem dominated by scrubby tree growth, dry soils, and woody shrubs.

bedrock: any solid rock exposed at the earth's surface, or overlain by unconsolidated material.

biodiversity: the diversity of life at a all scales - genetic, species, ecosystem and landscape.

board feet: Unit of volume measure for lumber or trees equal to 1" x 12" x 12".

boreal: means “north,” refers to a particular type of forest vegetation that is characteristic to high latitudes.

broadleaf: refers to those trees that have wide, flat leaves. In Wisconsin, these trees are deciduous, loosing their leaves in winter. Most are also angiosperms.

central sands: a region in Wisconsin in Portage, Wood, Juneau, Adams, Marquette, Waushara, and Waupace Counties that has characteristically sandy soil. Much of this area historically supported pine barrens.

clay: the smallest category of soil particles, less than $\frac{1}{256}$ millimeter in diameter.

clear cut: the timber harvest process that removes all trees from an area at the same time.

climate: the long-term weather pattern of an area.

community: in the assessment, forest composition refers to all of the tree species that are found in the forest.

composition: the makeup of forest or ecological unit in terms of the living organisms or group of organisms and non-living components present in the forest or ecological unit.

conifer: trees that carry their seeds in cones; trees that are primarily not broad-leaved (gingko, exception). Most are gymnosperms.

coulee: a streambed or valley with steep sides or surrounded by hills.

cubic foot: unit of volume measure equal to 12" x 12" x 12".

Cutover: the period of time during or area in which most of the timber from the upper Lake States was removed, about 1850–1920; can also describe forested land that has been completely harvested.

dbh: diameter at breast height; refers to the diameter of a tree as it stands in the forest at 4.5 feet from the ground.

defoliation: removal or loss of a plant's leaves, i.e., by insects.

disturbance: a discrete event, either natural or human-induced, that causes a change in the existing condition of an ecological system.

dominant: the largest trees in a stand.

Driftless Area: the area of Wisconsin that was never covered by glaciers. Located in the southwest area of the state, also includes parts of Minnesota, Iowa, and Illinois.

early succession: the first stages of succession (pioneer vegetation) immediately following disturbance, usually characterized by open, sunny conditions.

ecological capability: the inherent characteristics of land that determine what type of ecological communities may eventually develop there.

ecosystem: the plants, animals, fungi and microorganism together with their abiotic, physical surroundings and the interactions between these components that function as an ecological unit, such as a forest, pond, or swamp.

ecosystem: The biotic organisms of a particular habitat or area, such as a savanna or forest, together with the abiotic physical environment in which they live.

endangered: a species in danger of becoming extinct in all or part of its range.

European-American settlement: the time or process during which there was a dramatic increase of people of European descent moving into Wisconsin. Although the first Europeans arrived in Wisconsin in the 1630s, intense settlement did not occur until about 1825–1880.

extinction: the death of an entire species.

extirpation: the removal or loss of an entire species from an area.

flora: all of the plants in an area.

forest division: an ecological unit at a continental or regional scale; usually includes tens of thousands to millions of square miles.

forest health: the condition of the forest—considering biodiversity; ability to support trees, wildlife, other plants, and humans; functionality of natural processes; etc.

forest inventory: a random, systematic, statistically reliable survey of forest land to ascertain an estimate of various measurements of quantity, quality, health and trends of the forest.

forest survey units: units that the United States Forest Service uses to delineate forest regions. These are primarily based upon social and political boundaries. There are 5 Forest Survey Units in Wisconsin: Northeast, Northwest, Central, Southeast, and Southwest.

forest type: classification of forestland based on the most common species, determined by plurality of stems (whatever species has the most living stems). Associated species are determined by their volume.

forestland: land at least 16.7% stocked with trees of any size, or formerly having such tree cover and not currently developed for non-forest use. The area must be at least one acre in size, and 120 feet wide to be classed as forestland.

fragmentation: the process of dividing forest into smaller patches surrounded by disturbed or developed areas.

function: the roles played by the living and non-living components of ecosystems in driving the processes (e.g., carbon cycle, water cycle, nutrient cycle) that sustain an ecosystem.

game: wild animals that are hunted or fished for sport or food.

growth to removal ratio: numerical comparison of annual volume removed from a forested area to net annual growth volume in the same area. A measure of forest sustainability.

habitat: the specific environment that supports a particular plant, animal, fungi or microorganism population.

hard maple: trees in the maple genus (*Acer*) whose wood has a specific density greater than one. In Wisconsin this includes Sugar maple and black maple.

hardwood: usually refers to broadleaf timber species, more specifically—dicots.

herbivory: consumption of herbaceous vegetation (plants).

high-grade: a type of timber harvest method that harvests only the best trees in a stand.

hydrology: the moisture characteristics of the land; the distribution, characteristics, and cycling of water in a particular area.

Ice Age: in the assessment, Ice Age refers to the most recent time period when large sheets of ice covered major portions of Earth's land, which reached its peak at about 20,000 thousand years ago. During this time glaciers advanced into Wisconsin, covering most of the state. Glaciers retreated about 10,000 years ago.

invertebrate: an animal that does not have a backbone. Usually, invertebrates tend to be very small animals, like insects, spiders, and single-celled animals.

kettle: a depression caused by a large block of glacial ice that was covered by till or outwash and subsequently melted. Many kettles in Wisconsin are now filled with water and are lakes.

loam: a soil that is a mixture of sand and silt and clay.

lowland: an area of land that is moist much of the time due to geographic position or high water table influence.

mesic: having a temperate, moist climate, neither very dry nor very wet; pertaining to conditions of medium moisture supply.

moraine: a landform created by material pushed by a glacier.

national forests: A federal reservation, generally forest, range, or wildland, which is administered by the Forest Service, U.S. Department of Agriculture, under a program of multiple use and sustained yield for timber production, range, wildlife, watershed, and outdoor recreation purposes.

Natural Heritage Inventory: a Wisconsin DNR Bureau of Endangered Resources program that monitors the status and location of rare species, natural communities, and natural features in Wisconsin. It is connected to an international effort to do the same throughout the world which is administered by The Nature Conservancy.

natural regeneration: renewal of the forest either through re-seeding or the vegetative reproduction of existing plants.

non-industrial private forest land: land owned by individuals or corporations that are not directly involved in the forest industry.

non-productive forestland: land that cannot produce a commercially desirable tree due to poor stand or site conditions.

Northern Mixed Forest: a forest division that occurs in Wisconsin north of the tension zone. It is characterized by both broadleaf and conifer trees.

old growth: a forest that is old (significantly past the age of maturity of its dominant species), has a well-developed structure, usually characterized by many snags and dead wood on the ground; usually refers only to forest types that are a late successional type for the area; sometimes refers only to undisturbed, never-harvested forests.

other red oak: a term used traditionally to indicate species in the red oak category that are of lesser economic value for timber. In Wisconsin, these include Northern pin oak, Pin oak, and Black oak.

outwash: material, usually sand or gravel, that is deposited by water melting off glaciers.

parent material: the unconsolidated material, more or less weathered, from which soil is developed.

pioneer: in the assessment, a pioneer refers to a species that is among the first to colonize an area after disturbance.

plantation: an artificially reforested area sufficiently productive to qualify as timberland. The planted species is not necessarily predominant. Christmas tree plantations, which are considered cropland, are not included.

poles: an abbreviation for poletimber.

poletimber: a timber size class, indicating a tree that is of the poletimber size, at least 5 inches diameter at breast height but smaller than sawtimber size, (9 inches dbh for softwood and 11 inches dbh for hardwood).

prairie: an ecosystem dominated by grasses with few if any trees, usually with rich fertile soils.

precipitation: any form of water (snow, rain, sleet, etc.) that falls from the sky and reaches the ground.

primary forest: forest that has never been harvested or otherwise disturbed at a large scale by humans.

private land: land that is owned by an someone other than governments (National, State, County, or Municipal).

public land: land that is owned by government (National, State, County, or Municipal), may or may not be open for public use.

pulpwood: wood that is used for the pulp industries (usually to make paper).

reconstituted wood products: products made from wood that has been ground, chipped, chopped, etc. into small pieces of various shapes and sizes for use in product manufacture. Examples include paper, cardboard, oriented strand board (OSB), particleboard, animal bedding, mulch, etc.

reforestation: the reestablishment of a forest, either by planting seedlings or by allowing trees to naturally regenerate.

regeneration: the process by which land renews itself after major disturbance, the process of forest renewal.

removals: wood volume that has been removed from forest land through harvest, land use change or forestry operations such as thinning, site preparation, etc.

riparian: having to do with rivers and river systems.

sand: soil made up of particles that are clearly visible to the naked eye and up to 2mm in diameter. Sandy soils tend to be infertile and droughty.

saplings: a live tree 1.0–5.0 inches diameter at breast height.

savanna: an ecological community that is dominated by scattered trees and large areas of grasses and other forbs.

sawtimber: live tree of commercial species that has at least one 12 foot section (log), or two 8 foot sections (logs) usable for timber production. Softwood sawtimber must be at least 9 inches diameter at breast height, and hardwood must be at least 11 inches diameter at breast height.

second growth: a “second generation” forest—a forest that is a result of natural regeneration of a disturbed site.

select red oak: a term used traditionally to indicate tree species in the red oak category that are of greater economic value as timber. In Wisconsin, this includes only Northern red oak.

select white oak: a term used traditionally to indicate tree species in the white oak category that are of greater economic importance. All of Wisconsin’s white oaks fall into this category. They include White oak, Swamp white oak, Bur oak, and Chinkapin oak.

seral stage: a phase in the succession of an ecosystem, from very early successional communities to climax communities.

silt: the mid-size soil particle, between clay and sand.

site capability: the specific ability of a site to support vegetation or an entire ecosystem.

size class: describes the diameter of a tree, usually divided into 2 inch classes (e.g., 5.0–6.9 inches dbh).

slash: wood residue from logging.

soft maple: a term traditionally used to describe some species in the *Acer* (maple) genus. The wood of soft maples has a specific density of less 1.0 (it floats). Wisconsin soft maples include Red maple and Silver maple.

softwood: refers to the conifer trees.

Southern Broadleaf Forest: the forest division that occurs south of the Tension Zone in Wisconsin.

species: a taxonomic classification of life describing a group of organisms that are able to produce offspring through sexual reproduction.

species group: a designation used by the US Forest Service to lump some species with similar properties together. For example “aspen” is a species group composed of both Trembling aspen and Bigtooth aspen.

species of concern: a designation used by the Wisconsin DNR (and many other agencies and organizations) to describe those species about which some problem of abundance or distribution is suspected but not yet proven. The main purpose of this category is to focus attention on certain species before they become threatened or endangered.

structure: the pattern or physical organization of a forest or ecological unit. It has both vertical and horizontal components.

stumpage: value of standing trees for forest products to the forest landowner.

succession: the relatively predictable changes in an ecological community that occur after either natural or human-caused disturbance.



Tension Zone: an area between the Northern Mixed Forest and the Southern Broadleaf Forest that contains characteristic species from both forest divisions.

threatened: a legally defined status of a species (or population) that is likely to become endangered. These species are very rare and imperiled.

till: soil and other material that was deposited by the glaciers during the last Ice Age.

timber: trees or the wood of trees used for construction.

timberland: a technical definition of the US Forest Service. Refers to forestland that is producing or is capable of producing more than 20 cubic feet per acre per year of wood growth, under natural conditions. Timberland must also not be withdrawn from timber utilization (such as a State Park would be).

understory: the layer of a forest that is closest to the ground. Usually includes seedling trees, woody shrubs and a variety of non-woody plants.

ungulate: a hoofed mammal, usually herbivorous. Ungulates that have called Wisconsin home include whitetail deer, American buffalo, elk, and many others.

vernal pond: a pond that is only filled with water in the spring time.

vertebrate: an animal that has a backbone, usually a larger animal. Bats, horses, and fish are some vertebrates.

wetlands: an area that has saturated soil for at least some part of the year.

wildlife: A broad term that includes non-domesticated vertebrates, especially mammals and birds, and sometimes refers to fish or herptiles.



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